



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
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ATLANTA, GEORGIA 30303-8960

JUN 06 2011

Mr. Colley Billie  
Chairman  
P.O. Box 440021  
Tamiami Station  
Miami, Florida 33144

Dear Chairman Billie:

The U.S. Environmental Protection Agency has received and considered the revisions to the Miccosukee Environmental Protection Code Subtitle B: *Water Quality Standards for Surface Water of the Miccosukee Tribe of Indians of Florida* (MWQS) submitted by Mr. Truman E. Duncan's letter dated October 8, 2010. The revisions were adopted by the Miccosukee Business Council on October 6, 2010, and certified as duly adopted pursuant to applicable Tribal law by Mr. Bernardo Roman, III, Tribal Attorney, on November 8, 2010.

Revisions to the MWQS regulation included additional criteria for Class I waters, revised water quality criteria for Class III waters consistent with the EPA's Clean Water Act (CWA) Section 304(a) criteria recommendations, the option of expressing metals criteria in the dissolved form, addition of Chemical Abstract Registry Numbers, reorganization of criteria tables, and editorial changes to clarify criteria. These revisions were compared to the requirements of CWA Section 303 and 40 CFR Part 131.

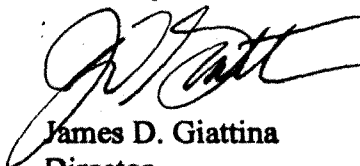
The conclusions of the EPA review of the new and revised standards are summarized in the enclosed document. The adopted revisions were divided into two categories: revisions to the water quality standards that were reviewed by the EPA under CWA Section 303(c) authorities and revisions that are either editorial or non-substantive in nature and, therefore, not considered by the EPA under CWA Section 303(c).

Based on the EPA review of the *Water Quality Standards for Surface Water of the Miccosukee Tribe of Indians of Florida* adopted October 6, 2010, the EPA has determined that the new and revised standards submitted by the Tribe comply with the requirements of CWA Section 303 and 40 CFR Part 131 and, therefore, are approved.

The EPA action to approve new and revised criteria for the protection of aquatic life, which are equal to or more protective than the EPA nationally recommended criteria, is subject to the results of the national 304(a) consultation under Section 7 of the Endangered Species Act. The EPA will notify the Tribe of the results of Section 7 consultation upon completion of the national consultation.

We would like to commend you and your staff for your continued efforts to protect and enhance the waters of South Florida. If you have questions regarding the EPA action, please contact me at (404) 562-9345 or have a member of your staff contact Eve Zimmerman at (404) 562-9259.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Giattina", written over the printed name.

James D. Giattina  
Director  
Water Protection Division

Enclosure

cc: Truman E. Duncan

**United States Environmental Protection Agency Determination**  
**Under Section 303(c) of the Clean Water Act**  
**Review of Miccosukee Environmental Protection Code Subtitle B:**  
**Water Quality Standards for Surface Waters of the Miccosukee Tribe of Indians of Florida**

This document summarizes the review of the revisions to the Miccosukee Environmental Protection Code Subtitle B: *Water Quality Standards for Surface Waters of the Miccosukee Tribe of Indians of Florida* (MWQS). The revisions, which were adopted by the Miccosukee Tribal Council on October 6, 2010, are the result of the Miccosukee Tribe of Indians of Florida's Triennial Review of its water quality standards required by Section 303(c) of the Clean Water Act (CWA). The revised MWQS were submitted to the U.S. Environmental Protection Agency (the EPA) for formal review by Mr. Truman E. Duncan's letter dated October 8, 2010. On November 8, 2010, Mr. Bernardo Roman III, Tribal Attorney, certified that the revisions were duly adopted pursuant to applicable Tribal law. The revisions were effective for Tribal law purposes upon adoption, and will be applicable for CWA purposes upon approval by the EPA.

The revisions adopted by the Tribe shown below are divided into two categories: revisions to the water quality standards that are reviewed by the EPA under CWA Section 303(c) authorities and revisions that are either editorial or non-substantive in nature, and therefore, not considered by the EPA under CWA 303(c). The results of the review are as follows:

**New and Revised Standards that are Approved by the EPA**

**Revisions to Section 3. P. Table 1 - Water Quality Standards for Class I Waterbodies**

The Tribe added the requirement that the sum of two or more of the three parameters in the Aldicarb group should not exceed 0.007 mg/l. The criterion is consistent with the EPA's *2009 Edition of the Drinking Water Standards and Health Advisories* and the requirements of 40 CFR § 131.11(b)(iii).

Currently, the Class I water bodies are protected by a criterion for total haloacetic acids (HAA5). The criterion was changed to criteria for Monochloroacetic, Dichloroacetic, and Trichloroacetic, which are individual haloacetic acids, with a criterion for total HAA5. Similarly, the Trichloromethanes (THM) criterion was also changed to four criteria for Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane with a criterion for the total THM. The criteria for the individual parameters as well as the group parameters are based on the EPA's maximum contaminant level (MCL) found in the EPA's *2009 Edition of the Drinking Water Standards and Health Advisories*. The added criteria are consistent with the requirements of 40 CFR § 131.11(b)(iii).

Also, the Tribe added a methyl tertiary butyl ether criterion based on *Drinking Water Advisory: Consumer Acceptability Advice and Health Effects analysis on Methyl Tertiary-Butyl Ether (MtBE)*, United States Environmental Protection Agency, the EPA-822-F-97-009, December 1997. The criterion is consistent with the requirements of 40 CFR § 131.11(b)(iii).

The existing Cryptosporidium, Giardia lamblia, and Viruses & Pathogen criteria applicable to Class I water bodies are the treatment techniques (TT), which reduce the level of a contaminant. The Tribe revised the criteria to specify the required percent removal or inactivation/kill of each pathogen. The revisions are based on the EPA's Maximum Contaminant Level found in the EPA's *2009 Edition of the Drinking Water Standards and Health Advisories*. The added criteria are consistent with the requirements of 40 CFR § 131.11(b)(iii).

### Revisions in Section 3. R. Class III-A and Class III-B Criteria

The Tribe updated the following aquatic life criteria:

Parameter	CAS No.	CMC $\mu\text{g/l}$		CCC $\mu\text{g/l}$	
		Existing Criterion	Revised Criterion	Existing Criterion	Revised Criterion
Acrolein	107028	190	3	290	3
Ammonia	7664417	1984 criteria	1999 criteria	1984 criteria	1999 criteria
Boron	-	-	-	750	Narrative Criteria
Selenium	7782492	20	None	5	5
Tributyltin	-	0.46	0.46	0.063	0.072

Appendix C was also added to provide the equations and additional information for calculating the ammonia criteria, which are both pH and temperature dependent. The revised aquatic life criteria and associated information were compared to the EPA's *National Recommended Water Quality Criteria*, 2010, found at <http://www.epa.gov/waterscience/criteria/wqctable/>. The revisions are consistent with the EPA's recommended criteria and, therefore, comply with the requirements of 40 CFR § 131.11(b)(1)(i).

The option for the expression of metals criteria as the dissolved form when authorized by the Micosukee Environmental Protection Agency was added in Table 2. Appendix A was added for the conversion factors for translating the total recoverable criteria into the dissolved criteria. The existing conversion factors included with the hardness equations following the original Table 2 were moved to Appendix A. Also, the following conversion factors were added to Appendix A.

Metal	CMC	CCC
Arsenic	1.000	1.000
Chromium	0.982	0.962
Mercury	0.85	0.85

On Page 2, of *Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria* dated October 1, 1993, the EPA provides two acceptable methods for expressing metals criteria, total recoverable and dissolved. Expression of metals criteria as total recoverable is the more conservative method because it includes all forms of the metal, while the dissolved method only includes the bioavailable fraction. The use of the dissolved criteria gives a more accurate value for the water column, but does not consider the sediment loading or food chain effects. Currently, the Tribe's metals criteria are expressed as the more conservative total recoverable. However, because there may be instances where the dissolved criteria are more appropriate, the Tribe is adding the option for expressing the criteria as dissolved.

This option and the associated conversion factors are consistent with 40 CFR § 131.11(b)(1)(i) and the EPA's *National Recommended Water Quality Criteria* dated 2010. The Tribe developed procedures to implement the option. The EPA finds that the procedures will implement the option in manner consistent

with the *Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria* dated October 1, 1993. The EPA has reviewed these procedures, and determined that they establish a “performance-based approach” for site-specific adjustment of water quality criteria for certain metals. (See Preamble to Alaska Rule, 65 FR 24641, 24647, April 27, 2000.) Under a performance-based approach, the EPA approval of the criteria adjustment procedure also serves as the Agency’s approval of the outcome of the performance-based approach. Therefore, a criterion that is established as a dissolved criterion using the Tribe’s procedure does not require the EPA’s approval under CWA Section 303(c) authorities. Because the Tribe has provided implementation procedures, which operate as a performance-based methodology, the resulting dissolved criterion is not considered a change to the standards. Therefore, the EPA’s approval of the resulting dissolved criterion is not necessary.

The Tribe updated the following criteria for the protection of human health:

Parameter	CAS No.	Human Health for the Consumption of			
		Water and Organism µg/l		Organism Only µg/l	
		Existing Criterion	Revised Criterion	Existing Criterion	Revised Criterion
Acrolein	107028	190	6	290	9
Dichlorobromomethane	75274	0.27	0.27	22	17
Acenaphthene	83329	670	20	990	20
PCB - 1242	-	0.000044	-	0.000045	-
PCB - 1254	-	0.000044	-	0.000045	-
PCB - 1221	-	0.000044	-	0.000045	-
PCB - 1232	-	0.000044	-	0.000045	-
PCB - 1248	-	0.000044	-	0.000045	-
PCB - 1260	-	0.000044	-	0.000045	-
PCB - 1061	-	0.000044	-	0.000045	-
Polychlorinated Biphenyls (PCBs)	-	-	0.000064	-	0.000064
Manganese	7439965	50	50	None	100

The revisions are consistent with the EPA’s *National Recommended Water Quality Criteria* dated 2010 and, therefore, comply with the requirements of 40 CFR § 131.11(b)(1)(i).

The following footnotes were added.

Selenium Criteria: The CMC = 1/[(f1/CMC1) + (f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 g/l and 12.82 g/l, respectively.

PCB’s: This criterion applies to total pcbs, (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses.)

Cyanide Criterion: The water quality criterion is expressed as g free cyanide (as CN)/L.

Endosulfan Criteria: The value for endosulfan is most appropriately applied to the sum of alpha-endosulfan and beta-endosulfan.

Mercury Criteria: The water quality criteria was derived from data for inorganic mercury (II), but is applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, this criterion will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a great extent, this criterion does not account for uptake via the food chain because sufficient data were not available when the criterion was derived.

DDT Criteria: This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).

The revisions are consistent with the EPA's *National Recommended Water Quality Criteria* dated 2010 and, therefore, comply with the requirements of 40 CFR § 131.11(b)(1)(i).

### **Revisions that are not New or Revised Water Quality Standards**

#### **Revisions to Section 3. P. Table 1 - Water Quality Standards for Class I Waterbodies**

The Tribe added Tribal Public Health Goal (TPHG) Criteria for 222 parameters. The TPHG will be used internally to estimate the acceptable drinking water levels for the parameters. As stated in the first footnote to Table 1, the criteria are not legally enforceable water quality standards, but are included as guidance to Tribal officials. Since the TPHG criteria will be used for guidance and are not considered standards, the EPA is not considering them under CWA Section 303(c).

An explanation of the treatment technique was added to the Total Coliforms criterion. The added explanation was "Every sample that has total coliforms must be analyzed for fecal coliforms; no fecal coliforms are allowed." The explanation is based on the EPA's *2009 Edition of the Drinking Water Standards and Health Advisories*. The revision does not change the criterion. Therefore, the EPA is not considering them under CWA Section 303(c).

The Tribe added the Chemical Abstract Service Registry (CAS) Number for each parameter in Table 1. CAS Number is a unique numerical identifier assigned by the "Chemical Abstracts Service" to every chemical described in the scientific literature. The addition of the CAS Number is an additional method for identifying each parameter and does not change the frequency, magnitude, or duration of the associated criteria. Therefore, the EPA is not considering them under CWA Section 303(c).

The criteria applicable to Class I waters were consolidated into Table 1. However, rather than relocating the criteria for Chloride, Color, Foaming Agents, Odor, pH, Heterotrophic Plate Count, and Turbidity

from Section 3 to Table 1, the Tribe chose to add references for the locations of the criteria. Because the references to existing criteria were added to the table and the frequency, magnitude, or duration of the criteria were not changed, the EPA finds the revisions are not new or revised water quality standards. Therefore, the EPA is not considering them under CWA Section 303(c).

Also, existing treatment technology criterion for *Legionella*, which is based on the EPA's MCL, was expanded to include the explanation that "the EPA believes that if *Giardia* and viruses are inactivated, *Legionella* will also be controlled." The explanation does not change the frequency, magnitude, or duration of the criteria, and is not a change to the standards. The EPA is not considering them under CWA Section 303(c).

Two footnotes were added to Table 1. The first footnote explains the basis, purpose, and appropriate use of the TPHG criteria. The second footnote explains the basis of the maximum contaminant level. The footnotes do not change the frequency, magnitude, and duration of the criteria, and are not a change to the standards. Therefore, the EPA is not considering them under CWA Section 303(c).

### **Revisions in Section 3. R. Class III-A and Class III-B Criteria**

The numeric criteria for Class III waters in Tables 2, 3, 4, and 5 were consolidated into one table divided into sections for Priority Pollutants, Non Priority Pollutants, and Organoleptic Effects. The new table is designated as Table 2. References to the tables in Sections 3.D, 3.P, and 4.D were revised to reflect the reorganization. Also, the information for converting metals criteria to the dissolved form and the calculating hardness dependent criteria, which followed the existing Table 2, was relocated to the new Appendix A and B. Because the revisions consolidate and reorganize existing criteria and provisions, there were no changes in the frequency, magnitude or duration of the criteria. Therefore, the reorganization of the existing criteria is not a change to the standards. The EPA is not considering them under CWA Section 303(c).

In order to provide an additional means of identifying a parameter, the CAS Number for each parameter was added to the new Table 2. As discussed above, the addition of the CAS Number is an additional method for identifying each parameter, and does not change the frequency, magnitude, or duration of the associated criteria. Therefore, the EPA is not considering them under CWA Section 303(c).

The MWQS require "Metals criteria shall be measured as total recoverable." However, the existing criteria for the metals in Table 2 were expressed as the dissolved form rather than as total recoverable. To be consistent with the requirement to measure the parameters as total recoverable, the expression of the criteria was changed to the total recoverable form. See the following table for the criteria revisions.

Parameter	CAS No.	CMC µg/l		CCC µg/l	
		Existing Dissolved Criterion	Revised Total Recoverable Criterion	Existing Dissolved Criterion	Revised Total Recoverable Criterion
Cadmium	7440439	2.0	2.13	0.25	0.27
Chromium (III)	16065831	570	1803	74	86.2
Copper	7440508	13.0	14	9.0	9.33
Lead	7439921	65	81.64	2.5	3.18
Selenium	7782492	20	None	5.0	5.0
Silver	7440224	3.2	3.78	None	None
Zinc	7440666	117.02	119.82	105.99	119.82

Since the requirement of expressing the criteria as total recoverable form was an existing requirement, the revision of the criteria is considered a correction of an error in the method of expression, and the EPA is not considering them under CWA Section 303(c). Therefore, the EPA is not considering them under CWA Section 303(c).

The following footnotes were added.

Asbestos Criteria: The criterion for asbestos is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act (SDWA).

Endrin Criteria: The derivation of the CCC for Endrin did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.

The added footnotes are consistent with the footnotes found in the EPA's *National Recommended Water Quality Criteria*, 2010, found at <http://www.epa.gov/waterscience/criteria/wqctable/>. However, the footnotes are informational and do not have a substantive effect on the intent or meaning of the water quality standards regulation, and do not alter the effectiveness of the standards either individually or when taken a whole. Therefore, the EPA is not considering the above footnotes under Section 303(c) of the CWA..

Also, the Tribe added the following footnote, which provides information on the basis of the Tribal criteria.

NRWQC: The Miccosukee Tribe derived most of these criteria from EPA's National Recommended Water Quality Criteria (NRWQC) list. The NRWQC is a compilation of water quality criteria for the protection of aquatic life and human health in surface waters and is required by Section 307(a)(1) of the federal Clean Water Act. However, the NRWQC does not contain criteria for each and every pollutant on the list. All pollutants were included in the Miccosukee Water Quality Standards to maintain [consistency] with the NRWQC.



The NRWQC footnote was added to clarify the basis of the MWQS, and does not affect the intent or meaning of the water quality standards. Therefore, the EPA is not considering the above footnote under CWA Section 303(c) authorities.

The following footnotes were revised.

Arsenic Criteria: Pollutant 1 is the trivalent form of Arsenic. For Freshwater CMC and CCC, the recommended water quality criterion for Arsenic criteria is was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. For Human Health Consumption of Water & Organisms, the water quality criterion for arsenic refers to the inorganic form only.

Cadmium, Chromium (III), Lead, Nickel, Copper, Silver and Zinc Criteria:

~~NOTE: In addition to these water quality criteria, other narrative standards may also apply. Cadmium, Chromium (III), Copper, Lead, Nickel, Silver and Zinc criteria are based on a hardness value of 100 mg/l of Calcium carbonate. The following hardness equations may be useful if the surface water exceed 100 mg/l.~~

~~Hardness dependant metals= criteria may be calculated from the following formulas:~~

~~Acute (dissolved) =  $\exp\{m_A[\ln(\text{hardness})] + b_A\}(CF)$~~

~~Chronic (dissolved) =  $\exp\{m_o[\text{hardness}] + b_o\}(CF) @$~~

~~NOTE: Metals criteria shall be measured as total recoverable~~

The freshwater criterion for these metals are expressed as a function of hardness (mg/L) in the water column. The values given here correspond to a hardness of 100 mg/L.

Criteria values for other hardness may be calculated from the following:

$CMC = \exp\{m_A [\ln(\text{hardness})] + b_A\}$ ,  $oCCC = \exp\{m_C [\ln(\text{hardness})] + b_C\}$  and the parameters specified in Appendix B – Parameters for Calculating Freshwater Metals Criteria That Are Hardness-Dependent.

Methylmercury Criterion: Note: Methylmercury criteria is expressed per unit of fish and shellfish tissue (wet weight) to protect the consumers of noncommercial freshwater fish and shellfish. The fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.

The revised footnotes do not have a substantive effect on the intent or meaning of the water quality standards regulations, and do not alter the effectiveness of the standards either individually or when taken as a whole. Therefore, the EPA is not considering the above footnotes under CWA Section 303(c) authorities.

**Public Participation**

A notice of intent to adopt changes to the MWQS and requesting comments on the proposed revisions was published in the Miami Daily Business Review on March 5, 2010. The public hearing was held on June 8, 2010. No public comments were received.

**Summary of Review**

Based on the EPA's review of the *Water Quality Standards for Surface Waters of the Miccosukee Tribe of Indians of Florida* adopted by the Tribe on October 6, 2010, the EPA has determined that the new and revised standards submitted comply with the requirements of CWA Section 303 and 40 CFR Part 131, and therefore are approved.